

SEMINÁRIO

Análise e Equações Diferenciais

14 novembro 2024 | 13:30 | sala 6.2.33

Fully nonlinear dead-core systems

Damião Araújo

(Universidade Federal da Paraíba)

ABSTRACT:

This talk explores fully nonlinear dead-core systems coupled with strong absorption terms. Our investigation reveals a chain reaction mechanism, utilizing the properties of an equation within the system to achieve higher sharp regularity across the free boundary. Furthermore, we establish geometric measure estimates and derive coincidence property for the free boundaries. We also obtain Liouville-type results for entire solutions. Notably, these findings are novel even when applied to linear systems. This is a joint work with Rafayel Teymurazyan (KAUST, Saudi Arabia, and Universidade de Coimbra, Portugal).